

COPY

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20231 on November 8, 2001.

C. Healion
C. Healion

Applicant : Matthew James Fischer, et al.
Application No. : 09/825,851
Filed : April 4, 2001
Title : METHOD OF PROVIDING
SYNCHRONOUS TRANSPORT OF
PACKETS BETWEEN ASYNCHRONOUS
NETWORK NODES IN A FRAME-BASED
COMMUNICATIONS NETWORK

Grp./Div. : 2661
Examiner : Not assigned

Docket No. : 42145/RJP/E264

01/09/2002 09:11:11 00000037 09825851

PETITION

01 FC:122

130.00 OP

Assistant Commissioner for Patents
Washington, D.C. 20231

Post Office Box 7068
Pasadena, CA 91109-7068
November 8, 2001

Commissioner:

In response to the Notice of Omitted Item(s) in a Nonprovisional Application mailed October 2, 2001, the Applicants are filing this Petition and include a Petition Fee in the amount of \$130. (37 CFR 1.17(h)).

The Applicants submit that the Application as filed included a Preliminary Amendment filed concurrently as part of the Application papers, wherein the Applicant amended the Brief Description of the Drawings portion of the Specification to correct typographical errors identifying Figs. 70 - 75 with their appropriate descriptions. Enclosed herewith are copies of the Utility Patent Application Transmittal indicating the Preliminary Amendment enclosed therewith,

RECEIVED

-1-

JAN 09 2002

OFFICE OF PETITIONS

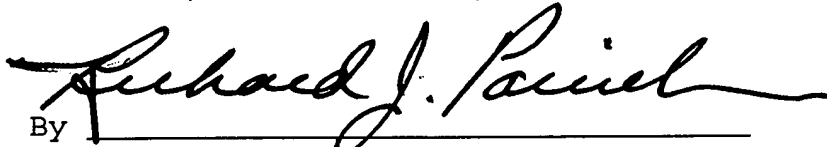
Application No. 09/825,851

the Preliminary Amendment text, and the return postcard indicating that the Preliminary Amendment was included and received as part of the Application filing papers.

Accordingly, the Applicants submit that the Notice of Omitted Items has been issued in error and that the Petition Fee accompanying this Petition should be refunded.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP



By

Richard J. Paciulan

Reg. No. 28,248

626/795-9900

RJP/cah

Enclosure

CAH PAS391091.1--*-11/8/01 8:29 AM

RECEIVED

JAN 09 2002

OFFICE OF PETITIONS



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/825,851	04/04/2001	Matthew James Fischer	42145/RJP/E264

CONFIRMATION NO. 4362

23363

CHRISTIE, PARKER & HALE, LLP
350 WEST COLORADO BOULEVARD
SUITE 500
PASADENA, CA 91105

FORMALITIES LETTER



OC000000006832060

CASE # 42145 ACTION Notes of Omitted ItemsREMINDER DUE DATE DEADLINE 12/2/01

Date Mailed: 10/02/2001

NOTICE OF OMITTED ITEM(S) IN A NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

A filing date has been accorded to the above-identified nonprovisional application papers; however, the following item(s) appear to have been omitted from the application:

- Figure(s) **70a - 70b** described in the specification.

I. Should applicant contend that the above-noted omitted item(s) was in fact deposited in the U.S. Patent and Trademark Office (USPTO) with the nonprovisional application papers, a copy of this Notice and a petition (and \$130.00 petition fee (37 CFR 1.17(h))) with evidence of such deposit **must** be filed within **TWO MONTHS** of the date of this Notice. The petition fee will be refunded if it is determined that the item(s) was received by the USPTO.

II. Should applicant desire to supply the omitted item(s) and accept the date that such omitted item(s) was filed in the USPTO as the filing date of the above-identified application, a copy of this Notice, the omitted item(s) (with a supplemental oath or declaration in compliance with 37 CFR 1.63 and 1.64 referring to such items), and a petition under 37 CFR 1.182 (with the \$130.00 petition fee (37 CFR 1.17(h))) requesting the later filing date **must** be filed within **TWO MONTHS** of the date of this Notice.

III. The failure to file a petition (and petition fee) under the above options (I) or (II) within **TWO MONTHS** of the date of this Notice (37 CFR 1.181(f)) will be treated as a constructive acceptance by the applicant of the application as deposited in the USPTO. **THIS TWO MONTH PERIOD IS NOT EXTENDABLE UNDER 37 CFR 1.136(a) or (b).** In the absence of a timely filed petition in reply to this Notice, the application will maintain a filing date as of the date of deposit of the application papers in the USPTO, and original application papers (*i.e.*, the original disclosure of the invention) will include only those application papers present in the USPTO on the date of deposit.

In the event that applicant elects not to take action pursuant to options (I) or (II) above (thereby constructively electing option (III)), amendment of the specification to renumber the pages consecutively and cancel incomplete sentences caused by any omitted page(s), and/or amendment of the specification to cancel all references to any omitted drawing(s), relabel the drawing figures to be numbered consecutively (if necessary), and correct the references in the specification to the drawing figures to correspond with any relabelled drawing figures, is required. Any drawing changes should be accompanied by a copy of the drawing figures showing the proposed changes in red ink. Such amendment and/or correction to the drawing figures, if necessary, should be by way of preliminary amendment submitted prior to the first Office action to avoid delays in the prosecution of the application.

RECEIVED

JAN 09 2002

OFFICE OF PETITIONS

A copy of this notice MUST be returned with the reply.

let

Customer Service Center
Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE

RECEIVED

JAN 09 2002

OFFICE OF PETITIONS

IN THE U.S. PATENT AND TRADEMARK OFFICE

APPLICATION

Title: **A METHOD OF PROVIDING SYNCHRONOUS
TRANSPORT OF PACKETS BETWEEN ASYNCHRONOUS
NETWORK NODES IN A FRAME-**

Priority Claimed? ☒ YES **NETWORK COMMUNICATIONS
BASED COMMUNICATIONS**
☒ Assignment Enclosed (List Assignee) **NETWORK
Broadcom Homenetworking, Inc.**

Check(s) **\$710.00 and \$40.00**

Client ID **E264**

Case No **42145**

Atty/Sec **RJP/sd2**

Date Mailed **8/8/01**

Express Mail No.

EL483653176US

Patent Mark

1+1

Transmittal Letter(s)

Application (No. of Pages) **219**

Executed

Declaration & Pwr of Atty

101

Informal/Formal Drawings

N/A

3 Specimens/Photos/Facsimiles

Small Entity Declaration

Info Disc Stmt/PTO-1449

Petition Extension of Time

~~XXXX~~ **Preliminary Amendment**

Executed

OTHER -Assignment

Checked by: **CarL**

PLEASE RETURN THIS POSTCARD

SERIAL NUMBER/FILING DATE

**JC978 U.S. PTO
09/825851**



Applicant Use Only

PATENT: ☐ ORD ☐ PRO ☐ PCT; ☒ ORP ☐ CPP ☐ DIV ☐ CON ☐ CIP ☐ REI ☐ REX OF ☐ DOCKET **37526; 37504**

MARK: ☐ TM ☐ SM ☐ TM/SM ☐ COLL ☐ CERT; ☐ ITU ☐ 44d ☐ 44e ☐ DIV

DOCKET: Y/N Standard ☐ FOR REV ☐ FOR DEADLINE ☐ Parent Case ☐ FOR REV/DEADLINE

UTILITY PATENT APPLICATION TRANSMITTAL
(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No. : 42145/RJP/E264
Inventor(s) : Matthew James Fischer, Tracy D. Mallory
Title : A METHOD OF PROVIDING SYNCHRONOUS TRANSPORT OF
PACKETS BETWEEN ASYNCHRONOUS NETWORK NODES IN A
FRAME-BASED COMMUNICATIONS NETWORK
Express Mail Label No. : **EL483653176US**

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, D.C. 20231

Date: April 4, 2001

1. ☒ **FEE TRANSMITTAL FORM** *(Submit an original, and a duplicate for fee processing).*

2. **IF A CONTINUING APPLICATION**

☐ This application is a of patent application No. .

Prior application information: Examiner ; Group Art Unit:

☒ This application claims priority pursuant to 35 U.S.C. §119(e) and 37 CFR §1.78(a)(4),
to provisional Application No. 06/196,002 and 06/197,224.

3. **APPLICATION COMPRISED OF**

Specification

219 Specification, claims and Abstract (total pages)

Drawings

101 Sheets of drawing(s) (FIGS. 1 to 97)

Declaration and Power of Attorney

☒ Newly executed

☐ Unexecuted declaration

☐ Copy from a prior application (37 CFR 1.63(d))(for continuation and divisional)

4. ☐ **Microfiche Computer Program** *(Appendix)*

5. ☐ **Nucleotide and/or Amino Acid Sequence Submission** *(if applicable, all necessary)*

☐ Computer Readable Copy

☐ Paper Copy (identical to computer copy)

☐ Statement verifying identity of above copies

6. **APPLICANT(S) STATUS UNDER 37 CFR § 1.27**

☐ Applicant(s) and any others associated with it/them under § 1.27(a) are a SMALL
ENTITY

7. **ALSO ENCLOSED ARE**

RECEIVED

JAN 09 2002

OFFICE OF PETITIONS

UTILITY PATENT APPLICATION TRANSMITTAL
(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.: 42145/RJP/E264

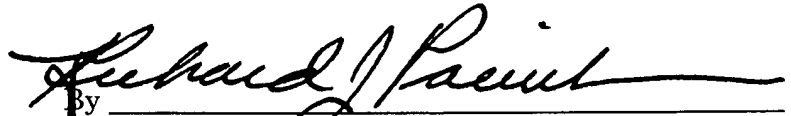
- ☒ Preliminary Amendment
☐ A Petition for Extension of Time for the parent application and the required fee are enclosed as separate papers
☒ An Assignment of the invention with the Recordation Cover Sheet and the recordation fee are enclosed as separate papers
☐ This application is owned by pursuant to an Assignment recorded at Reel , Frame
☐ Information Disclosure Statement (IDS)/PTO-1449
☐ Copies of IDS Citations
☐ Certified copy of Priority Document(s) (*if foreign priority is claimed*)
☐ English Translation Document (*if applicable*)
☒ Return Receipt Postcard (MPEP 503) (should be specifically itemized).
☐ Other

8. CORRESPONDENCE ADDRESS

CHRISTIE, PARKER & HALE, LLP, P.O. BOX 7068, PASADENA, CA 91109-7068
Customer Number: 23363

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP


By Richard J. Paolulan
Reg. No. 28,248
626/795-9900

RJP/sd2

RECEIVED
JAN 09 2002
OFFICE OF PETITIONS

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

EXPRESS MAIL NO. EL483653176US

Applicant : Matthew James Fischer, et al.
Application No. : Not Assigned
Filed : Herewith
Title : A METHOD OF PROVIDING SYNCHRONOUS
TRANSPORT OF PACKETS BETWEEN
ASYNCHRONOUS NETWORK NODES IN A
FRAME-BASED COMMUNICATIONS
NETWORK
Docket No. : 42145/RJP/E264

RECEIVED

JAN 09 2002

OFFICE OF PETITIONS

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Post Office Box 7068
Pasadena, CA 91109-7068
April 4, 2001

Commissioner:

IN THE SPECIFICATION:

Please amend the specification as follows:

Delete the paragraphs from Page 13, line 33 through Page 14, line 10 , and replace them with the following new paragraphs:

--Fig. 70 shows a VoIP system in accordance with the present invention.

Fig. 71 shows packet arrival timing relationships in accordance with the present invention.

Figs. 72a and 72b show transmit queues before and after priority frame reordering , respectively in accordance with the present invention.

Fig. 73 depicts a VoIP system in accordance with the present invention.

Figs. 74 and 75 show upstream and downstream latency components in accordance with the present invention.--

Delete the paragraphs from Page 118, line 13, through Page 119, line 18, and replace them with the following paragraphs:

--Rate Selection refers to the algorithm by which B chooses $(S_{i,\text{desired}}, b_{i,\text{desired}})$. Each of the algorithms presented use some or all of the following input statistics upon receiving packet P_i , (squared error refers to squared error refers to squared decision point error): Header rate, (s_{\min}, b_{\min}) ; Header error indicator, $X_{\text{hdr},i} \in \{0,1\}$, 0 indicates error-free header, 1 indicates header error; Header sum of squared error, $\epsilon_{\text{hdr},i}$; Header maximum squared error, $E_{\text{hdr},i}$; Header length symbols, n_{hdr} ; Payload rates, (S_i, b_i) ; Payload error indicator, $X_{\text{pld},i} \in \{0,1\}$, 0 indicates error-free payload, 1 indicates payload error; Payload sum of squared error, $\epsilon_{\text{pld},i}$; Payload maximum squared error, $E_{\text{pld},i}$; Payload length (symbols), $n_{\text{pld},i}$; FSE power for each symbol rate in S, $P_{\text{FSE},s,i}$, and Normalized, per-symbol ISI power estimate for each symbol rate in S, $P_{\text{ISI},s,i}$. Given these input statistics, each algorithm maintains state variables, performing computations based on the input statistics and state variables, first to select the new desired constellation size from R_s for each symbol rate in S, then to select the new desired symbol rate from all those in S. Two algorithms are presented, requiring different amounts of state storage and computation: (1) Mean Squared Error Algorithm and (2) Maximum Squared Error Algorithm. For the purpose of constellation size selection, we initially assume that only a single symbol rate, s , is under consideration, and that $s_i = s$ for all i .

With regard to the Mean Squared Error Algorithm, error rates of candidate constellations are estimated, selecting constellation to maximize throughput subject to maximum length packet, maximum PER constraint. If we assume that: probability of symbol error is independent from symbol to symbol, hence:

$$PER(SNR, b) \equiv 1 - (1 - SER(SNR, b))^{\frac{N_{\max}}{b}}$$

where :

N_{\max} = maximum packet length (bits)

b = candidate constellation size (bits per symbol)

SNR = symbol decision point signal to noise ratio, normalized by loss in mean
symbol energy of constellation size b relative to constellation size b_{\min}

SER = symbol error rate

--

REMARKS

Please enter this Preliminary Amendment in the above-referenced application being filed herewith.

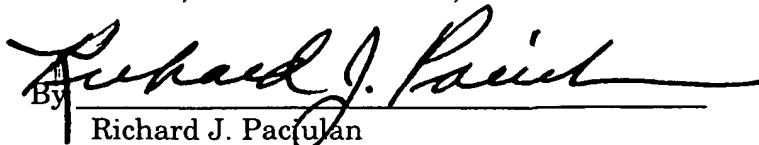
The Applicant has amended the Brief Description of the Drawings to correct typographical errors identifying Figs. 70 - 75 with their appropriate descriptions. The Applicant submits that no new matter has been added.

The Applicant has also amended the Detailed Description to correct a typographical error of a wordprocessing equation mislocation. The Applicant submits that the corrected location is now consistent with that of the comparable text set forth in U.S. Application No. 60/196,002 incorporated by reference and that no new matter has been added.

Marked-up version of the changes made to the specification by the current amendment are not included since paragraphs herein are merely being deleted and new paragraphs added in place thereof.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By 
Richard J. Paculan
Reg. No. 28,248
626/795-9900

RECEIVED

JAN 09 2002

OFFICE OF PETITIONS